

DART AEROSPACE LTD	Work Order:	15841
Description: 212/205 high Fwd Crosstube Assembly	Part Number:	D212-664-101
Drawing: D212-664-141 rev. A	Qty:	1
Page 1 of 2		

Step	Location	Procedure	By	Date	Qty
1	EXPEDITING	Issue W/O	SM	01.11.02	1
2	QC	Photocopy blue file and type labels per PPP D212-664-101	SM	01.11.02	
3	CNC CELL	Material: Qty Part number Description batch 1 D6005-128 Crosstube 15349	SM	01.12.01	1
4	CNC CELL	Fill tube with sand & install plugs DT8534 on both ends as per folio FA113	SM	01.12.01	1
5	CNC CELL	Turn first side as per folio FA113	SM	01.12.01	1
6	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D212-664-141.	SM	01.12.01	1
7	QC	Inspect Level 1	SM	01.12.01	1
8	CNC CELL	Turn second side as per folio FA113	SM	01.12.01	1
9	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D206-664-141	SM	01.12.02	1
10	QC	Inspect Level 1	SM	01.12.02	1
11	CNC CELL	Polish entire outside surface of crosstube	SM	01.12.02	1
12	CNC CELL	Remove sand and plugs	SM	01.12.02	1
13	METAL	Scribe part # and batch # using vibrating stylus as per dwg D212-664-141	SM	01.12.02	1
14	FINISHING	Chemical Conversion Coat per QSI 005 4.1 within 24 hours of machining	SM	01.12.02	1
15	QC	Inspect Level 5	SM	02/03/25	1
16	METAL	Bend tube as per dwg D212-664-141 using CNC bender program 212-fw	SM	02/03/25	1
17	QC	Inspect Level 6	SM	02/03/25	1
18	METAL	Drill pilot holes in tube as per dwg using drill jig DT8548 & DT8549	ED	02/03/25	1
19	METAL	Ream hole to finish size in tube as per dwg D212-664-141 using drill jig DT8548 & DT8549	ED	02/03/25	1
20	METAL	Deburr & Inspect for surface damage. Repair damage within limits per D212-664-141	ED	02/03/25	1
21	FINISHING	Chemical conversion coat per QSI 005 4.1 within 24 hours of bending and drilling	PH	02-03-25	1
22	QC	Inspect Level 5	PH	02/04/01	1
23	QC	Liquid Penetrant Inspect per QSI 038 Or Issue P/O: 2004373 LPI per ASTM 1417 Level 2 Attach copy of NDT results to W/O	LL	02-04-02	1
24	RECEIVING	Inspect for transit damage & attach copy of NDT results to W/O	PH	02-04-16	1

RELEASED

01.10.10

AEROSPACE LTD		Work Order:	158411
Description: 212/205 high Fwd Crosstube Assembly		Part Number:	D212-664-101
Drawing: D212-664-141 rev.A		Qty:	1
Page 2 of 2			

Step	Location	Procedure	By	Date	Qty
25	QC	Inspect for damage & ensure results are per dwg D212-664-141	<i>[Signature]</i>	02/04/22	1
26	COMPOSITE	Prime inside and outside per QSI 005 4.2	<i>[Signature]</i>	02-04-22	1
27	COMPOSITE	Paint outside with white Imron per QSI 005 4.2	<i>[Signature]</i>	02-04-23	1
29	COMPOSITE	Wrap in plastic bag to protect from scratch	<i>[Signature]</i>	02-04-24	1
30	QC	Inspect Level 14	<i>[Signature]</i>	02-04-24	1
31	STORES	Pick: Qty Part number Description batch 2 D2856-600-851 abrasion strip B16476 2 D2893-1 support B15914-B16477 4 MS21920-24 clamp M10564	<i>[Signature]</i>	02-04-25	1
32	METAL	Install abrasion strips per QSI 035 using DT8581	<i>[Signature]</i>	02-04-25	1
33	METAL	Install supports and clamps per D212-664-141. Torque clamps to 80-100 in lb.	<i>[Signature]</i>	02-04-25	1
34	QC	Inspect Level 5	<i>[Signature]</i>	02-04-29	1
35	STORES	Pick: Qty Part number Description batch 4 AN6-36A bolt M11776-M10288 4 MS21042L6 nut (or MS21042-6) M9619 8 AN960JD616 washer M10631	<i>[Signature]</i>	02-05-29	1
36	QC	Inspect Level 4	<i>[Signature]</i>	02-05-29	1
37	STORES	Package per PPP D212-664-101	<i>[Signature]</i>	02-05-30	1
38	EXPEDITING	Close W/O Cost / Part: 1155.09 1176.05	<i>[Signature]</i>	02/05/31	1

Rev	Date	Change	Revised By	Approved
A	01.02.06	New issue	EC	
B	01.08.08	Reformat	SM	
C	01.08.08	Reformat	SM	
D	01.10.10	Added tool # & Imron paint	SM	<i>[Signature]</i>

RELEASED
01-10-16

RELEASED



PPP

Part Number **D212-664-101**

Description **212 Fwd Crosstube**

Eligibility **Bell 204/205/212/412**

Box Part Number **MBX103** Dimension **6 x 33 1/4 x 113"**
L x W x H

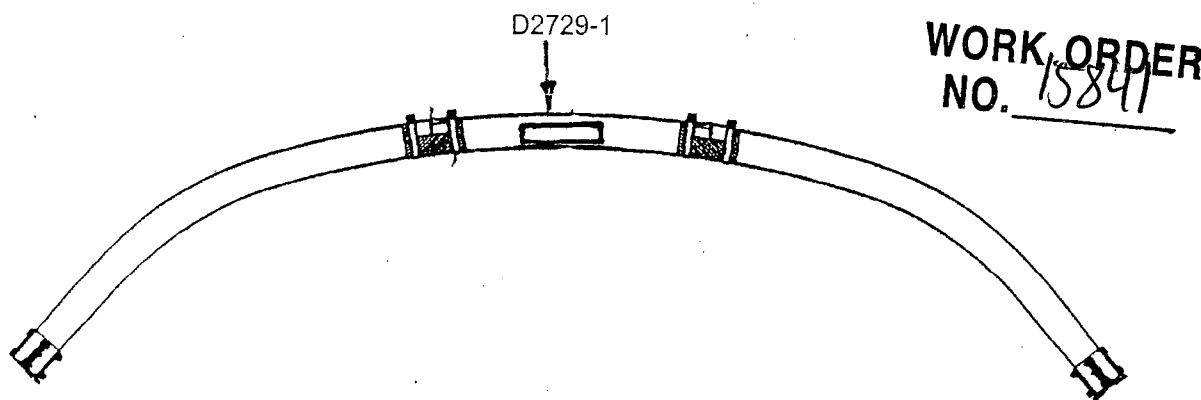
Other Packaging **MF3433** Dimension **MF668 / MF1612**

Logo Decals **N/A** **N/A**

Packaging Instructions and Decal Placement

D212-664-101

Technician will apply label D2729-1 as per drawing below. Place crosstube in plastic bag. Use template DT8603, in box, trace foam outline. Remove template and glue foam in place (MF3433 2 sets, 4 Pcs, MF668 2 sets, 4 Pcs, MF1612 4 Pcs). Foam hardware and paper work together, wrap around left side of crosstube. Apply top portion of MF3433 and MF668 to correspond with bottom foam already in place, then close box. Apply Dart logo tape (always starting at first complete Dart logo) on top portion of box, length wise. Apply strapping after first Dart logo and there after apply strapping after every second Dart logo. Apply clear tape over strapping. Apply label D2729-3 as per instructions in QSI 014 section 4.5. Apply clear tape over label and staple.



D2729-1

D2729-3

DART				TEL: 1-613-632-3336	
TRANSPORT CANADA APPROVAL # 09-89				FAX: 1-613-632-4443	
P/N	D212-664-101	CHG	CHG001		
DESC	Crosstube Fwd High	STC	SH01-9		
LOT	BXXXXX	STC	SR01298NY		
MODEL	204/205/212/412	STC			
MADE IN CANADA					



Dart Aerospace Ltd

1270 Aberdeen Street
Hawkesbury, ON, K6A 1K7
CANADA
TEL.: 1 613 632 3336 FAX: 1 613 632 4443

CROSSTUBE FWD HIGH

P/N: D212-664-101 CHG001

B/N: BXXXXX

Revision: A

Date: 01.09.21

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Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 20, 2001
11:38 am

Work Order No : 0015841
Project Name : *D212-664-101
Project For : WKU
Work Order Type : Main
Main WO Number :
House Part Number : *D212-664-101
Description : Crosstube Installation
Manufactured : Yes
Amount Req'd : 1
Amount Done : 0
Start Date :
Est Finish Date : 01-02-02
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

Dart Aerospace, Ltd

1270 Aberdeen Street

Hawksbury, Ontario

K6A 1K7

Tel: (613) 632-3336 Fax: (613) 632-4443

Supplier Code: Sheet 1 of 1

INSPECTION CHECKLIST

PART NO.: D212-664-141

PHY. CHANGE: ..

DESCRIPTION: Cross Tubes

DRAWING CHANGE: REV A

MANUFACTURING DATE: 01/12/07

UNICORP E.O.'S: N/A

BATCH NO.: 15841

SERIAL NO: N/A

PURCHASE ORDER NO.: N/A

QUANTITY	ACCP.T.	REJ.
1	1	0
2	2	0
3	3	0
4	4	0
5	5	0
6	6	0
7	7	0
8	8	0
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98	98	0
99	99	0
100	100	0

DATA SHEET NO.: N/A

SIDE A

FIRST ARTICLE

II. PERIODIC CONFORMITY

FINAL INSPECTION

ITEM	DWG PAGE	DRAWING DIMENSION	TOL.	ACTUAL DIMENSION	ACC.	REJ.	% OF INSP.	Method of Inspection	Comments
1	1	126.510	+/- .030	N/A				TAPE	
1	2	2.304	$\pm .005$	2.309	✓			MIC	
"	"	2.340	"	2.345	✓			"	
"	"	2.398	"	2.403	✓			"	
"	"	2.448	"	2.453	✓			"	
"	"	2.498	"	2.503	✓			"	
"	"	2.549	"	2.554	✓			"	
"	"	2.599	"	2.544	✓			"	
"	"	2.671	"	2.674	✓			"	
"	"	2.701	"	2.706	✓			"	
1	3	.200	$\pm .010$.202	✓			VERN	
"	"	30°X.500	$\pm .010$	30°X.500	✓			VERN	
"	"	.063	$\pm .010$	R.063	✓			R-G	
"	"	2.740	$\pm .005$	2.741	✓			MIC	
"	"	R.500	$\pm .010$	R.500	✓			R-G	
"	"	5.097	$\pm .001$	5.097	✓			VERN	

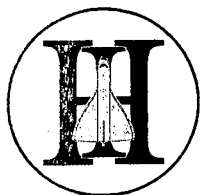


DATA SHEET NO.: N/A

☐ FIRST ARTICLE ☐ PERIODIC CONFORMITY ☐ FINAL INSPECTION

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Rev. A



HeathAir

INTERNATIONAL (1991) INC.

681 Ave. Lepine, Dorval, Québec H9P 1G3

Tél.: (514) 636-1000 • Fax: (514) 636-0031

W.O. N° 23289

A.M.O. Number: 46/90

NON-DESTRUCTIVE TESTING REPORT

AIRCRAFT / COMPONENT INFORMATION

REGISTRATION:

MODEL/TYPE:

SERIAL NUMBER:

TOTAL HR/LDG:

OPERATED BY:

BASED AT:

INSPECTION REQUIREMENTS

Carry out NDT on eight (8) cross tubes as per
ASTM E-1417-99.

P/N D312-604-101 S/N's B15837, B15838, B15839, B15840,
B15841, B15842, B15843 & B15845

☐ RADIOGRAPHY

☐ ULTRASONIC

☒ PENETRANT

☐ MAGNETIC PARTICLE

☐ EDDY CURRENT

INSPECTION REPORT

Fluorescent penetrant inspection performed on eight
(8) cross tubes in accordance with ASTM E-1417-99.
No evidence of cracking found.

A level 4 penetrant was used in lieu of the level 2.
A level 4 penetrant is more sensitive than a level 2.
Mel-L-Chek FBP-914 penetrant was used.

THE MAINTENANCE DESCRIBED ABOVE HAS BEEN PERFORMED IN ACCORDANCE WITH
THE APPLICABLE STANDARDS OF AIRWORTHINESS

INSPECTED BY: _____

DATE

APR 15 2002

INSPECTION
STAMP(S)



CUSTOMER INFORMATION

CUSTOMER: DART AEROSPACE

P.O. NUMBER 2004 373

ADDRESS:

CONTACT NAME:

LABOUR	@	\$
MATERIALS	@	
TRAVEL EXPENSES	@	GST
HOTEL EXPENSES	@	PST

INVOICE NO.

TOTAL \$

WHITE COPY - INSPECTION FILE • YELLOW COPY - CUSTOMER • PINK COPY - ACCOUNTANT